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## **The Relationship between Organizational Culture and Corporate Performance: A Study in Mechanical Enterprises in Hanoi**

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### **Abstract**

Mechanical engineering is a profession evaluated for its potential and long-term development in Hanoi. Mechanical product manufacturing is always affected by the global competitive environment. Therefore, each mechanical enterprise must always change, find new directions, and develop new operating processes to increase business efficiency and achieve sustainable development goals. Corporate culture is a factor that affects the way a business

operates and achieves its goals. Research paper in mechanical enterprises in Hanoi, with 119 satisfactory survey questionnaires sent to 119 enterprises in 3 months of 2023. The author uses PLS-Smart to process the collected data. The results show that corporate culture has a positive impact on corporate performance. Among them, adhocracy culture has the strongest impact, followed by hierarchy culture, clan culture, and finally market Culture.

**Keywords:** Organizational Culture, Operational Efficiency, Mechanical Enterprise

### **1. Introduction**

According to statistics from the Hanoi Department of Industry and Trade, there are more than 14,000 enterprises and mechanical production facilities in the area with nearly 300,000 employees. The mechanical industry was once considered the key to domestic industrial production, a key industry that played a leading role, but in the current period, the mechanical industry is having to find a way to survive and develop. In the coming years, the mechanical industry still has the prospect of increasing revenue, but its competitive position will be threatened by foreign companies. Therefore, mechanical enterprises always have to change to improve operational efficiency and develop sustainably. There are many internal and external factors that affect the performance of an enterprise, especially in a competitive environment. Among them, the element of corporate culture must be mentioned. In today's competitive business environment, differentiation is shifting from products and services to corporate culture and resources. This unique resource helps organizations gain a competitive advantage through internal and external resources. Each business operates in a different corporate culture and is affected differently by performance. Culture determines how people behave, so understanding the culture of an organization is essential.

The article aims to find out the influence of corporate culture on corporate performance in mechanical enterprises in Vietnam. The content of the article is divided into 3 parts, part 1 explores the theoretical basis of organizational culture and operational efficiency; Part 2 identifies independent variables, dependent variables and research methods; Part 3 discusses research results; and finally, gives suggestions to help mechanical enterprises operate effectively in today's unpredictable competitive environment.

### **2. Literature Review**

#### **2.1 Organizational Culture**

According to Edgar Schein (2000), organizational culture is associated with social culture, it is a step forward of social culture and also a deep layer of social culture. Organizational culture needs to pay attention to both productivity and efficiency as well as the relationships between people in the organization. According to Kotter and Heskett (1992) <sup>[10]</sup>, organizational culture represents a combination of values, and interdependent relationships in the organization and tends to be transmitted for a long time. Williams *et al.* (1993) argued that organizational culture is the set of beliefs, attitudes, and values that exist in a common and stable manner in an organization. Truong Thi Huong Xuan and Nguyen Khac Hoan (2019) <sup>[15]</sup> stated that organizational culture is the sum total of values, beliefs, and perceptions, as well as thinking methods that the members of the organization agree on, and that culture greatly influences the way members act to a large extent. Organizational culture is also a tool to create a unique identity for businesses. Organizational culture is the cultural value built during the formation, development,

and existence of the organization, becoming a concept and tradition that profoundly affects the activities, ways of thinking, and organizational behavior.

Culture determines how people behave so understanding the culture of an organization is essential. Organizational culture is a factor affecting management as well as improving business performance in both financial and non-financial aspects.

## 2.2 Business Performance Hiệu quả hoạt động doanh nghiệp

Corporate performance can be described as the summation of the achievements of a business or departmental unit. The business performance of an enterprise is expressed by a system of measurement indicators. Drury (2018) [11] stated that financial and non-financial measurement systems are widely used to evaluate corporate performance. Commonly used financial metrics such as ROI, EVA, and revenue growth rate. Non-financial indicators are often used as indicators of the satisfaction of stakeholders, indicators related to market share, and indicators related to quality. Kaplan (1998) [8] has shown that there are many studies that use financial results to reflect business performance because these results are objective and convenient. Financial results are provided from accounting results and comply with the principles of ensuring objectivity, reasonableness, and validity. However, in many cases, the existence and development of an enterprise are not reflected in financial indicators but in customer satisfaction, employee capacity, or internal processes of the enterprise. Therefore, non-financial results are increasingly used to evaluate business performance. The combination of both financial and non-financial results will help businesses operate stably in the long run and more effectively in a fiercely competitive environment.

## 2.3 Impact of Organizational Culture on Business Performance

Denison and Mishra (1995) [2] studied the influence of organizational culture and organizational performance through the involvement, consistency, adaptability, and mission of organizational culture. The results have shown that all four characteristics have a strong impact on firm performance. Peters and Waterman (1982) [16] had shown that successful businesses have excellent cultural characteristics, the research results show that organizational culture has an influence on the productivity of the business. Similarly, Deal and Kennedy (1982) [3] also argued for the importance of a strong culture in contributing to firm performance. Van der Post *et al* (1998) [14] conducted a study of 128 enterprises listed on the Johannesburg Stock Exchange, the results showed that there is a positive influence of organizational culture on performance. Zakari *et al* (2013) [12] studied the influence of organizational culture on the performance of banks in Ghana. Research results have shown that organizational culture characteristics positively affect performance results. The study also found that there are differences in cultural characteristics between different banks, but there is no difference in performance between these banks.

Accordingly, it can be affirmed that corporate culture is a

decisive factor in business performance and has a positive impact on business performance. Therefore, the following hypothesis has been proposed:

*H1: Clan culture positively affects business performance.* Schein (2010) [13] suggested that Clan Culture is determined by teamwork, the bond between individuals.

*H2: Hierarchy culture positively affects business performance.* Schein (2010) [13] pointed out that hierarchical culture is defined by work standards, systematic processes with clear norms. Stability, predictability, and operational efficiency are long-term organizational concerns.

*H3: Market culture positively affects business performance.* Schein (2010) [13] argued that a market culture emphasizes stability and control, creates an effective work environment that promotes competition and focuses on external dealings with suppliers and customers.

*H4: Adhocracy culture positively affects business performance.* Schein (2010) [13] suggested that an adhocracy culture emphasizes creativity and flexibility, allowing managers to find new challenges, and always improving technology. Innovation is important for businesses with a creative culture.

## 3. Research Method

With the goal of studying the influence of corporate culture on business performance, the author uses quantitative research with the PLS-SEM model through the SmartPLS 3.3 tool. The study performed tests with the PLS-SEM path model to evaluate the reliability of the scale, measurement model, and structural model and test the research hypotheses.

Data for the study were collected within 3 months, from March 1, 2023, to June 30, 2023. The respondents to the survey are managers at all levels of the enterprise. The total number of votes sent was 130, sent to 130 businesses. After classifying and cleaning the data, 119 votes were collected to include in the quantitative analysis.

Based on various studies done before, especially developing on the research of Rosario *et al.* (2017) several variables were applied in this study to measure the impact of corporate culture. to operational efficiency. Apply the 5-point Likert scale: 1- Strongly disagree; 2 - Disagree, 3 - Neutral, 4 - Agree, 5- Strongly Agree.

**Table 1:** Scale description table

S. No	Factor	Code	No. Variables
1	Clan Culture	CC	3
2	Hierarchy Culture	HC	2
3	Market Culture	MC	2
4	Adhocracy Culture	AC	3
4	Operational efficiency	EP	2

## 4. Results

### 4.1 Measurement Model Analysis

In the measurement model, the author assesses the quality of the observed variable. The outer loading factor of the variable needs to be greater than or equal to 0.7, then the observed variable is quality (Hair *et al.*, 2014) [6]. The results of Table 2 show that, 12 observed variables have a loading system of more than 0.7, so all 12 observed variables are evaluated as having quality to include in the next analysis.

**Table 2:** Outer Loadings

	AC	CC	EP	HC	MC
AC1	0.820				
AC2	0.703				
AC3	0.863				
CC1		0.814			
CC2		0.776			
CC3		0.885			
EP1			0.876		
EP2			0.910		
HC1				0.910	
HC2				0.873	
MC1					0.868
MC2					0.906

After the observed variables were evaluated for quality, the author assessed the reliability of the scale. According to Hair *et al.*, (2014)<sup>[6]</sup>, the intrinsically consistent reliability of the variables in the model should be evaluated based on both cronbach's alpha reliability and composite reliability. Many researchers such as Hair *et al.* (2010)<sup>[6]</sup>, Bagozzi & Yi (1988)<sup>[1]</sup> agree that 0.7 is an appropriate threshold. The values of Cronbach's Alpha and Composite Reliability in this study on corporate culture and corporate performance are both higher than 0.7. Therefore, the variables of this study ensure reliability.

**Table 3:** Construct Reliability and Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
AC	0.731	0.810	0.840	0.637
CC	0.772	0.815	0.866	0.683
EP	0.748	0.759	0.887	0.798
HC	0.745	0.758	0.886	0.796
MC	0.730	0.743	0.880	0.786

To evaluate the convergence, the author relies on the Average Variance Extracted (AVE). Hock & Ringle (2010)<sup>[7]</sup> suggest that a scale achieves convergent value if the AVE is 0.5 or higher. Analysis of the measurement model shows that the AVE values of the observed variables are all greater than 0.5. Therefore, the observed variables ensure convergence.

The author uses Fornell-Larcker Criterion to test the discriminant validity of all measurement models. Fornell and Larcker (1981)<sup>[5]</sup> recommend that discriminability is guaranteed when the square root of the AVE for each latent variable is higher than all correlations between the latent variables. Table 4 shows, the discriminant of the variable scale is guaranteed.

**Table 4:** Fornell-Larcker Criterion

	AC	CC	EP	HC	MC
AC	0.798				
CC	0.456	0.826			
EP	0.686	0.493	0.893		
HC	0.370	0.170	0.503	0.892	
MC	0.456	0.268	0.519	0.453	0.887

In addition, the author uses the HTMT index to test the discriminant value of the measurement model. With the HTMT index, Kline (2015)<sup>[9]</sup> proposes that if this value is

below 0.85, discriminant validity is guaranteed. Table 5 shows that all the HTMT indexes of the variables are less than 0.85. Therefore, all variables have discriminant values.

**Table 5:** Heterotrait-Monotrait Ratio (HTMT)

	AC	CC	EP	HC	MC
AC					
CC	0.575				
EP	0.857	0.622			
HC	0.466	0.213	0.677		
MC	0.621	0.343	0.690	0.619	

**4.2 Structural Model Analysis**

The structural model is evaluated based on four aspects: multicollinearity problem, model fit, R-square coefficient, and f-square coefficient.

Before conducting structural model analysis, the author checks and evaluates the phenomenon of multicollinearity between latent variables. To evaluate the problem of multicollinearity for the structural model, the study uses the inner VIF coefficient with a maximum threshold of 5 as suggested by Hair *et al.*, (2014)<sup>[6]</sup>. The analysis results show that the VIF coefficients are all less than 5, so there is no multicollinearity in the research model.

**Table 6:** Inner VIF Values

	AC	CC	EP	HC	MC
AC			1.551		
CC			1.271		
EP					
HC			1.315		
MC			1.442		

The results of the structural model analysis in Table 7 show that all P Values of the effects are less than 0.05, so these effects are statistically significant. There are 4 variables affecting EP namely AC, CC, HC, and MC. The standardized impact coefficients of these four variables are 0.429, 0.215, 0.236, and 0.159. Specifically, the results of PLS-Sem confirm that Adhocracy Culture has a positive impact on firm performance ( $\beta=0.429, P<0.050$ ), supporting hypothesis H4. The results of PLS-Sem confirm that Clan Culture has a positive impact on corporate performance ( $\beta=0.215, P<0.050$ ), supporting hypothesis H1. The results of PLS-Sem confirm that Hierarchy Culture has a positive impact on firm performance ( $\beta=0.236, P<0.050$ ), supporting hypothesis H2. The results of PLS-Sem confirm that Market Culture has a positive impact on firm performance ( $\beta=0.159, P<0.050$ ), supporting hypothesis H3.

**Table 7:** Path Coefficients

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics ((O/STDEV))	P Values
AC -> EP	0.429	0.434	0.067	6.373	0.000
CC -> EP	0.215	0.215	0.064	3.329	0.001
HC -> EP	0.236	0.228	0.072	3.286	0.001
MC -> EP	0.159	0.164	0.079	2.007	0.045

To evaluate the impact of one or more independent variables on a dependent variable in the SEM model, the author uses the adjusted R-squared index. The adjusted R squared of EP is 0.587, so the independent variables affecting it including AC, CC, HC, and MC explained 58.7% of the variation

(variance) of the EP variable.

**Table 8: R Square**

	R Square	R Square Adjusted
EP	0.601	0.587

## 5. Conclusion

Research results have shown that there is a relationship between corporate culture and corporate performance. This result is quite similar to the study of Fareed *et al.* (2017) <sup>[4]</sup>, which recognized that organizational culture affects the implementation of resources to create competitive advantage, and has a significant influence to the activities of the organization. In which, the factors representing the organizational culture studied include: Clan Culture, Hierarchy Culture, Market Culture, and Adhocracy Culture. Adhocracy Culture has the most positive effect on business performance. In mechanical enterprises, when business managers emphasize creativity and flexibility in finding new challenges while always improving technology, it will positively affect innovation in the global competitive environment. This is a key factor for businesses to operate effectively and ensure sustainable development.

Hierarchy Culture has the second biggest influence on business performance. In a mechanical enterprise, when working standards and systematic technological processes have clear norms, it will ensure the stability and long-term performance of the organization.

Next, Clan Culture positively affects business performance. Clan Culture is defined by teamwork, the bond that holds individuals together. In Clan Culture, employees trust each other, and managers and employees can directly exchange, learn and share knowledge with each other. Therefore, the working environment is significantly improved and labor productivity increases, resulting in increased profits for businesses.

Finally, Market Culture positively affects business performance. A market culture that emphasizes stability and control, creates a productive work environment that fosters competition and focuses on external dealings with suppliers and customers. Vietnam develops a market mechanism economy and is active in international integration to create a dynamic economic environment. Businesses always aim to meet the needs of consumers and increase customer satisfaction. Therefore, to achieve high market share and competitive strength, businesses need to aim for the ability to match the market culture.

From the research results, the author proposes some recommendations to improve operational efficiency in enterprises. Firstly, leaders need to invest and pay attention to building a culture in the enterprise to ensure the development of a strong culture in the right direction, making the development of corporate culture a fundamental goal to create a driving force to promote production and business activities of enterprises. Second, the development of a code of cultural conduct in the enterprise. In which, it is necessary to clearly define the position, role, and duties of the head as well as the entire system of employees in the enterprise. Third, the development of corporate culture is associated with constant innovation and creativity. Leaders must have a spirit of change towards innovation in guiding corporate culture. Finally, develop corporate culture on the basis of national culture with the spirit of respect and compliance with the law. Building corporate culture must be

consistent with the national culture, ensuring the correct implementation of the provisions of the law.

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